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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/729,593

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Richard Aumayer

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EXAMINER

BOATENG, ALEXIS ASIEDUA

ART UNIT

PAPER NUMBER

2838

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/729,593

Applicant(s)

AUMAYER ET AL.

Examiner

Alexis Boateng

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4 - 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5-7, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koo (U.S. 6,147,473) in view of Minamiura (U.S. 2002/0000787).

Regarding claim 1, 12 and 15, Koo discloses wherein a method for charging a battery having a control device (figure 2 item 10) that influences a charging current for the battery in a predefined manner and carries out at least to different charging methods, the method comprising:

in a first charging method, maintaining a substantially constant voltage (column 1 lines 15 – 19) and;

in a second charging method, taking measures resulting in dynamization (column 1 lines 31: in the third stage of charging, which comes directly after the first stage of charging with a voltage, the voltage is increased which results in dynamization). Koo discloses the invention as previously claimed, but does not disclose the remainder. Minamiura discloses in paragraphs [0013] – [0014] wherein the battery is discharged after it has been charged in the second charging process. At the time of invention, it would have been obvious to a

person of ordinary skill to modify the Koo system with the Minamiura system so that the battery is not damaged by excess internal pressure.

Regarding claim 5, Koo does not disclose the invention as claimed. Minamiura discloses in paragraph [0037] wherein the battery is discharged after the state of charge has exceeded 100%. This can be seen as a de-excitation process as pressure is released as it is discharged and the charging rate is brought down.

Regarding claim 6, Koo discloses in wherein further comprising increasing a charging voltage with respect to a usual value in the second charging method.

Regarding claim 7, Koo discloses wherein the charging is increased to about 16 volts (column 1 lines 31). Koo discloses the claimed invention except for the exact value of 16 volts. It would have been obvious to a person of ordinary skill in the art to modify the voltage so that it is at a higher voltage so that it takes a shorter time to charge. Since it has been held that there, where the general condition of a claim are disclosed in a prior art, discovering an optimum value of a result variable involves only routine skill in the art. In re Bosch, 617 F.2d 272, 205 USPQ 214 (CCPA 1980).

3. Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koo (U.S. 6,147,473) in view of Roseman (U.S. 5,623,197).

Regarding claim 2, Koo does not disclose wherein the battery is a lead acid battery in a motor vehicle that is charged via a generator that is regulated to predefined voltages via a voltage regulator. Roseman discloses in column 1 lines 12 – 20 wherein a lead acid battery is used in motor vehicle. Roseman

further discloses in column 4 lines 21 – 47 wherein the generator charges the battery and wherein the generator is regulated by the voltage regulator. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Koo system with the Roseman system so that damaging excessive overcharge can be prevented.

Regarding claim 8, Koo does not disclose the invention as claimed. Roseman discloses in column 5 lines 11 – 17 wherein the charging voltage is increased via corresponding controlling by a voltage regulator, which provides an increased target voltage value for regulating an output voltage. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Koo system with the Roseman system so that there is a higher battery charge rate and a quicker battery recharge.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koo (U.S. 6,147,473) in view of Kohl (U.S. 5,594,321).

Regarding claim 9, Koo does not disclose the invention as claimed. Kohl discloses in figure 1 items 3 and 61 wherein the bridge rectifier is disposed within the generator, influencing the charging voltage to be rectified in the output stage. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Koo system with the Kohl system so that faults in the battery can be detected.

5. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koo (U.S. 6,147,473) in view of Maechara (U.S. 6,777,905).

Regarding claim 10, Koo does not disclose the invention as claimed. Maechara discloses in column 4 lines 56 – 65 wherein the excitation current is interrupted after a time, then this process is repeated. Maechara discloses the claimed invention except it does not specify wherein the first time is in a range of 20 to 60 seconds and second time being about one second. It would have been obvious to a person of ordinary skill in the art to repeat the process so that the output level of the voltage is controlled. Since it has been held that there, where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claim 11, Koo does not disclose the invention as claimed. Maechara discloses in figure 1 item 201, a MOSFET, disposed in a voltage regulator, item 2 used to de-excite the charging device. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Koo system with the Maechara system so that the voltage can be properly regulated.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koo (U.S. 6,147,473) in view of Bertness (U.S. 2003/0025481).

Regarding claim 13, Koo discloses wherein a method for charging a battery having a control device (figure 2 item 10) that influences a charging current for the battery in a predefined manner and carries out at least to different charging methods, the method comprising:

in a first charging method, maintaining a substantially constant voltage (column 1 lines 15 – 19) and;

in a second charging method, taking measures resulting in dynamization (column 1 lines 31: in the third stage of charging, which comes directly after the first stage of charging with a voltage, the voltage is increased which results in dynamization). Koo discloses the invention as previously claimed, but does not disclose the remainder. Bertness discloses in paragraphs [0015] – [0018] wherein the battery charges the load, which requires a higher voltage. Since the load requires a higher voltage to be powered, the battery's charging voltage is increased. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Koo system with the Bertness system so that a sufficient amount of voltage is provided to the loads so they work properly.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koo (U.S. 6,147,473) in view of Cheiky (U.S. 6,459,243).

Regarding claim 14, Koo does not disclose the invention as claimed. Cheiky discloses column 2 lines 17 - 25 wherein protective methods must be employed to prevent damage from any of the methods used. At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the Koo system with the Kohl system so that the battery is not easily destroyed.

Response to Arguments

3. Applicant's arguments filed 12/01/06 have been fully considered but they are not persuasive. The applicant argues wherein deactivation does not take place in the Minimiura system. As disclosed in paragraph [0037], the charge rate is decreased, which can be seen as de-activating the system. The applicant further argues wherein the Minimiura reference charging is performed using different currents and the claimed invention, regulation is performed to a constant voltage and that pressure is not measured. Minimiura discloses different charging methods, in paragraph [0011]. The fact that there are different reasons or that the charging methods are done differently, does not change the fact that there are two different charging methods performed. As previously stated, the Minamuiura reference can be seen as using deactivation when the charging rate is decreased.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexis Boateng whose telephone number is (571) 272-5979. The examiner can normally be reached on 8:30 am - 6:00 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on (571) 272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AB


Adolf Deneke Borhane
Primary Examiner